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ABSTRACT

Because the Army has had a series of contracts with Duke University under which the services of scientists were obtained whose pay often exceeded the daily equivalent of the highest GS salary rate, the Chairman of the House Committee on Appropriations requested the GAO to review the Army-Duke contracts, and other contractual arrangements of the military services for employing experts and consultants through outside organizations. Chapter I of the report discusses the authorization for Department of Defense (DOD) contracts with outside agencies. Chapter 2 discusses the Army contracts with Duke University, the services performed by the experts, how the scientists were obtained, the determination of pay rates, and other issues related to payment and fees. Chapter 3 examines the limited use of contracts with outside organizations by the Departments of the Navy and Air Force. Chapter 4 explores the DOD's reasons for using Army-Duke type of contractual arrangements. Chapter 5 deals with the rates paid to all defense-science advisory committee members, which often are not the maximum allowed, whereas, according to Chapter 6, most rates paid by DOD contractors exceeded the authorized rates. (AF)

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REPORT TO THE
COMMITTEE ON APPROPRIATIONS
HOUSE OF REPRESENTATIVES

Use Of Contracts With Universities And Other Organizations To Employ Experts And Consultants B-169457

Department of Defense

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BY THE COMPTROLLER GENERAL
OF THE UNITED STATES

APRIL 13, 1971

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-169457

Dear Mr. Chairman:

This is our report on the use by the Department of Defense of contracts with universities and other organizations to employ experts and consultants. The review was made in response to your request of June 19, 1970. The results are summarized in the digest which appears at the beginning of the report.

We have discussed the matters in this report with representatives of the Department of Defense, but they have not had a chance to review it. In accordance with arrangements made with your office, we are simultaneously sending copies to the Secretary of Defense and to the Chairman, Civil Service Commission.

We plan to make no further distribution of this report unless copies are specifically requested, and then we shall make distribution only after your agreement has been obtained or public announcement has been made by you concerning the contents of the report.

Sincerely yours,

Elmer B. Staats

Comptroller General
of the United States

The Honorable George H. Mahon, Chairman
Committee on Appropriations
House of Representatives

COMPTROLLER GENERAL'S
REPORT TO THE
COMMITTEE ON APPROPRIATIONS,
HOUSE OF REPRESENTATIVES

USE OF CONTRACTS WITH UNIVERSITIES AND OTHER ORGANIZATIONS TO EMPLOY EXPERTS AND CONSULTANTS

Department of Defense B-169457

D I G E S T

WHY THE REVIEW WAS MADE

Federal agencies may employ experts and consultants temporarily or intermittently without regard to civil service and classification laws. Those employed under the authorizing statute (5 U.S.C. 3109), however, may not be paid more than the daily equivalent of the highest rate paid under the General Schedule (GS) established for Federal employees.

The Army has had a series of contracts with Duke University under which Army research and development activities have obtained the services of scientists. The pay of those scientists often has exceeded the daily equivalent of GS-18, the highest GS salary rate.

During fiscal year 1971 appropriations hearings, members of the House expressed the opinion that the scientists were in the category of experts and consultants intended by the Congress to be limited to the GS-18 rate of pay.

At the request of the chairman of the House Committee on Appropriations, the General Accounting Office (GAO) reviewed the Army-Duke contracts and other contractual arrangements of the military services for employing experts and consultants through outside organizations; examined the advantages claimed for such contracts; and, for comparison, obtained information on the rates paid to consultants by industrial and not-for-profit defense contractors.

Alternative methods of obtaining the services of experts and consultants include direct contracts with the individuals and temporary employment under what are known as excepted civil service appointments.

FINDINGS AND CONCLUSIONS

The Navy and Air Force made limited use of contracts with universities and other organizations to obtain experts and consultants. (See p. 26.) The Army, however, made numerous such contracts--solely with Duke. (See p. 9.)

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APRIL 13, 1971

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Army-Duke contracts

From July 1961 through June 1970, the Army reimbursed Duke about $7.8 million for obtaining the professional services of scientists. (See p. 11.)

Duke paid about $1.5 million in fiscal year 1970 for scientists' services and travel. GAO found that the rates paid in excess of the daily GS-18 equivalent had amounted in that year to about $188,000. (See p. 16.)

The Army considers the contracts to be research and development contracts with an educational institution, rather than personal services contracts, and therefore does not consider them subject to statutory pay limitations. (See p. 19.)

The Army informed GAO that the Army activities employing scientists had often required reports from them, although the Army-Duke contracts included no such requirement. GAO has recognized that task orders requiring an end product, such as a report, are not subject to the GS-18 limitation. GAO's sample of 11 consultants obtained by Duke for the Army Electronics Command showed that nine had been required to submit technical reports or other technical data. (See p. 22.)

Revision of Army-Duke agreement

In October 1970 the Army and Duke revised their basic agreement to state that task order contracts would be for nonpersonal research services and that Duke would furnish a report on each task order.

Nonpersonal services have been defined in Comptroller General rulings to include work performed by an individual who is responsible for an end result, free of the supervision of the Government and of an employer-employee relationship. Under those circumstances the individual would be regarded as an independent contractor, not as an employee, and his services would be nonpersonal rather than personal.

Under the Army-Duke revised agreement, in GAO's opinion the statutory pay limitation would not apply if each task order were, in fact, for specific research or development and for the delivery by the individual of a report or other end product.

If the services involved, however, were considered personal services under Government direct contract with the individual or under civil service appointment, the use of Duke as an intermediary would not remove the statutory limitation. The requirement that Duke furnish a report to the Army would not alter that fact. (See pp. 21 to 24.)

A change also was made in the procedures under which Duke obtains scientists for the Army. Formerly the requesting activity could designate in writing the name of the scientist desired. The new procedure provides

for Duke to select the scientist, but the requesting activity may suggest names by telephone. GAO believes that the revision makes little substantive change in Duke's role. (See pp. 11 to 14.)

Advantages claimed for university-type contracts

The military services informed GAO that using university-type contracts for consultants was administratively easier and provided a quicker response to urgent problems than using the civil service or direct-hire procedure. In a limited test of requests to the Army Research Office-Duke, however, GAO found little evidence of urgent need. (See p. 32.)

The Department of Defense (DOD) reported--and GAO disagrees--that the cost of consultants' services through a university was about the same as it would be through the appointment method, since contract personnel were paid only for actual time worked whereas appointed consultants were paid portal-to-portal, i.e., for time spent in travel. GAO believes that it is within administrative discretion to provide by contract for compensation for travel time. Failure to do so, however, is not a proper basis for authorizing a daily pay rate higher than the statutory maximum. Also, GAO found that many consultants appointed by civil service appointment were not paid for travel time. (See pp. 37 to 41.)

Variance in pay rates of committee members

The rates paid by DOD to scientists serving on its public science advisory committees and boards range from a statute-imposed limit of $50 a day for members of the Naval Research Advisory Committee to the maximum GS-18 rate. (See p. 42.)

Rates paid by contractors

GAO's analysis of rates paid to consultants by DOD contractors showed that commercial organizations paid an average of $158 a day, the same as Duke paid, compared with the maximum of $128 for GS-18 during most of fiscal year 1970. Not-for-profit contractors paid an average of $133, and universities generally paid an average of $124. (See p. 46.)

MATTERS FOR CONSIDERATION BY THE COMMITTEE

GAO believes that the Committee, in reviewing the use of experts and consultants by DOD and other Federal agencies, may wish to consider:

--The reasons why the Army finds it necessary to contract with a university for a significant amount of assistance, often at rates in excess of GS-18, when the Navy and Air Force do not. (See p. 36.)

--Whether limitations on pay for experts and consultants should be more flexible, in view of the generally higher non-Government rates.

(See p. 49.) Agencies already have some flexibility through discretionary pay for time spent in travel. (See p. 41.)

--Whether the pay limitations should be modified because of the virtually unenforceable distinction, in many cases, between personal services, for which a report may be incidental, and nonpersonal services, for which a report or other end product is the primary purpose of the employment. (See p. 25.)

--Inconsistencies in the pay of members of defense scientific advisory boards, especially the statutory limitation of $50 a day for members of the Naval Research Advisory Committee. (See p. 44.)

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ABBREVIATIONS

ASPR	Armed Services Procurement Regulation
DOD	Department of Defense
GAO	General Accounting Office
GS	Civil Service Commission General Schedule

COMPTROLLER GENERAL'S
REPORT TO THE
COMMITTEE ON APPROPRIATIONS,
HOUSE OF REPRESENTATIVES

USE OF CONTRACTS WITH UNIVERSITIES
AND OTHER ORGANIZATIONS TO EMPLOY
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CHAPTER 1

INTRODUCTION

This review was made in response to a request dated June 19, 1970, from the chairman, Committee on Appropriations, House of Representatives. A copy of his letter is included as appendix I.

Under section 3109, title 5, United States Code (5 U.S.C. 3109), Federal agencies, when authorized in an appropriation or other statute, may employ experts or consultants or organizations thereof temporarily (1 year or less) or intermittently without regard to civil service and classification laws. Experts or consultants hired as officers or employees may not be paid at rates in excess of the per diem equivalent of the highest rate payable under the General Schedule (GS) salary rates established for Federal employees under the Classification Act, unless other rates are specifically provided in the appropriation or other law.

Civil Service Commission guidance provides that, under 5 U.S.C. 3109, an expert or a consultant ordinarily not be paid a rate in excess of the highest rate payable for GS-15; however, an expert or a consultant hired for professional engineering services primarily involving research and development or for professional services involving physical or natural sciences or medicine may be paid a rate not to exceed the highest rate payable to a GS-18. During fiscal year 1970 the GS-18 maximum rate payable was $128 a day until April 15, 1970, when the rate became $136, effective retroactively to December 28, 1969.

The annual Department of Defense Appropriation Act authorizes the Secretary of Defense and the Secretaries of the Army, Navy, and Air Force to procure services in accordance with 5 U.S.C. 3109 if they deem it advantageous to the national defense and if, in their opinions, the existing facilities of DOD are inadequate. In connection with these services, the Secretaries are authorized to pay travel expenses of the individuals, including actual transportation and per diem in lieu of subsistence. The appropriation statute does not authorize the procurement of the services of experts and

consultants at higher rates of pay than those authorized by 5 U.S.C. 3109.

For the employment of experts and consultants outside competitive civil service procedures, the Comptroller General has held that the Commission has the authority to determine what duties and responsibilities constitute exempt expert and consultant positions and whether a particular position in which employment is proposed is an exempt position. The Commission has promulgated definitions for agencies to use in deciding whether excepted employment is proper in each case.

To avoid requiring agencies to submit each case for prior approval, the Commission enters into general agreements with agencies on standards, criteria, and controls for employing experts and consultants. Under these agreements agencies may make appointments without the Commission's specific prior authorization but subject to postaudit by the Commission.

In accordance with chapter 304 of the Federal Personnel Manual, DOD and the Commission entered into such an agreement for the employment, with or without compensation, of experts and consultants. The agreement covers services obtained by excepted civil service appointments or by personal service contracts. The employment of experts or consultants by excepted appointments is governed by the requirements set forth in the personnel regulations of the Commission and the military departments. The policy and procedures for the procurement of experts and consultants by contract are set forth in the Armed Services Procurement Regulation (ASPR).

ASPR defines experts and consultants as those persons who are exceptionally qualified, by education or experience, in particular fields to perform some specialized services. They are to be utilized when highly specialized, and, often, high-priced knowledge and skill is required, but not on a full-time basis. ASPR requires that experts or consultants

employed by excepted appointments or through personal services contracts be charged against personnel ceilings.[1] According to Commission and DOD regulations, it is not proper to use an expert or a consultant to do a job that a regular employee can do, one that calls for full-time continuous employment, or one organized to bypass competitive employment procedures or Classification Act pay limits.

The Department of the Army has had a series of contracts with Duke University under which research and development activities of the Army have been furnished with the services of outstanding and uniquely qualified scientists. The daily rates paid by Duke University for the services of those scientists, with subsequent reimbursement by the Army, in many instances exceeded the daily equivalent of the GS-18 rate of pay.

During appropriations hearings in April 1970, officials of the Department of the Army were questioned by members of the House Subcommittee on the Department of Defense concerning the propriety of the Army-Duke arrangement. The Army explained that the contracts were similar to others under which a contractor finds it necessary to obtain outside assistance to fulfill contractual requirements. Several Subcommittee members, however, expressed the opinion that the scientists fell into the category of experts and consultants intended by the Congress to be limited to the GS-18 rate of pay.

Accordingly the chairman asked GAO to

--identify and gather details about current contractual arrangements of the three military services, including the Army-Duke contracts, under which organizations provide the services of experts and consultants directly to DOD research and development activities at rates in excess of those authorized in 5 U.S.C. 3109;

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[1]On December 26, 1970, DOD received agreement of the Office of Management and Budget to eliminate administrative ceilings on all civilian employment for a 1-year trial period.

--identify administrative procedures which make such contractual arrangements favorable compared with direct appointments or contracts with individuals who perform expert or consultant services; and

--canvass industrial firms and nonprofit contractors about the rates paid for experts and consultants who assist them in fulfilling defense contracts, for comparison with the rates paid by the Government.

CHAPTER 2

ARMY CONTRACTS WITH DUKE UNIVERSITY TO PROVIDE SERVICES OF EXPERTS AND CONSULTANTS

The Department of the Army informed us that it contracted only with Duke University to obtain intermittent, short-term scientific and technical assistance. We found that since 1961 the Army Research Office-Durham had awarded 35 contracts to Duke University to provide scientific and technical services to various Government activities, including the services of outstanding and uniquely qualified scientists. These contracts were awarded pursuant to a basic ordering agreement established in June 1961 to simplify contractual arrangements for scientific and technical assistance to Army activities.

FUNCTIONS OF ARMY RESEARCH OFFICE-DURHAM

The Army Research Office-Durham is an outgrowth of the former Office of Ordnance Research established on the Duke campus in 1951 to sponsor ordnance research. In 1961, upon the reorganization of the Army and elimination of the technical services, the Office of Ordnance Research was redesignated "the Army Research Office-Durham."

The mission of the Army Research Office-Durham is to sponsor that portion of the Army basic research program in mathematics and in the physical, engineering, and environmental sciences carried out through grants and contracts with educational institutions, research institutes, and Government and industrial laboratories in the United States.

CONTRACTS WITH DUKE UNIVERSITY FOR PROVIDING SERVICES OF SCIENTISTS

We identified 35 contracts with Duke through which the Army Research Office-Durham had accomplished its functions of (1) providing uniquely qualified scientists and (2) administering the Army Junior Sciences and Humanities Symposia Program and a part of its functions of (1) providing personnel and facilities to aid in solving specific problems or

in improving Army operations in specific areas and (2) carrying out special contractual research programs.

During the period July 1961 through June 1970, the Research Office paid Duke about $13 million under these contracts. This total does not include payments for investigations made under contracts and grants for other basic research programs managed by the Research Office.

The number of contracts and the amounts paid during the period for each of the various types of services or work performed by Duke are set forth in the following table.

Type of services or work	Number of contracts	Amount (000 omitted)
Scientific and technical services to Army activities	29	$ 6,243
Scientific and technical services to the Army Research Office and the National Aeronautics and Space Administration	1	109
Scientific and technical services to the Army Research Office-Durham and the Department of Transportation	1	66
General assistance to the Army Research Office-Durham	1	3,508
Army Junior Sciences and Humanities Symposia Program	1	1,157
Numerical analysis and computer research project	1	1,108
Summer employment of academic community scientists in Army laboratories	1	805
Total	35	$12,996

Army Research Office-Durham officials stated that the 35 contracts awarded since 1961 pursuant to the basic ordering agreement with Duke were the only known contracts that the Research Office had with Duke or with any other activity to provide the services of outstanding and uniquely qualified scientists to requesting activities. The contracts

were all one-source negotiated contracts and were reported as cost-reimbursement contracts for research and development work with an educational institution.

From the date of inception of each of the 35 contracts through June 30, 1970, about 60 percent of the amount reimbursed by the Research Office to Duke related directly or indirectly to the costs of obtaining the professional services of uniquely qualified scientists for requesting Army activities, as follows:

	Amount (millions)	Percent of total reimbursed
Direct payments for scientists' services	$5.2	40
Overhead charged by Duke on cost of professional services	.4	3
Travel and incidental costs related primarily to scientists hired	1.9	15
Administrative salaries related to obtaining scientists services	.3	2
Total	$7.8	60

The remaining $5.2 million consisted of costs for special contractual research work, such as the project on numerical analysis and computers, or for assistance to the Research Office in evaluating basic research proposals for support by the Army.

How scientists are obtained

In anticipation of revisions to the basic ordering agreement between the Army Research Office-Durham and Duke, the use of revised procedures for requesting scientific services began in July 1970.

The process is usually begun by an Army activity's sending the Research Office a formal request for technical or scientific assistance. Prior to July 1970 the requesting activity either nominated an individual scientist known to be competent or identified the problem and requested the

Research Office to furnish names from which to make a selection. If no individual was nominated, Duke could be contacted for suggestions. In accordance with written procedures, in all cases Duke had final selection approval of the advisor.

Once a choice was made, the Research Office conducted preliminary negotiations concerning availability and pay and submitted a recommendation to Duke. The Research Office resolved any problems with Duke about whether the scope of the work was consistent with Duke's policy. Duke formalized the employment arrangements with the scientist, served as the point of contact for the scientist during performance of his services, and apprised the Research Office of any significant developments.

In July 1970 several major changes in the procedures were made. The requesting activities were informed by the Research Office that they could no longer specify individuals in their written requests for consultants. The names of desired consultants, however, could be made known to the Research Office by telephone.

Once the Research Office has verified that (1) the requested services are within the scope of the Research Office-Duke contract and (2) funds are available, the Chief Scientist, the commanding officer, and the contracting officer approve the formal request before it is forwarded to Duke. Previously, final approval was not always made by the contracting officer; requests could be forwarded to Duke with the formal approval of only the Chief Scientist. If the requesting activity has suggested a person or persons to perform the services, the Research Office also will informally communicate the suggestion to Duke.

Duke University evaluates the technical validity of the request. Should the request be declined, it is returned to the Research Office. When the request is accepted, Duke, rather than the Research Office, selects the scientist; determines his interest, availability, and rate of compensation and other related costs; and reaches tentative agreement on work dates, travel, and other arrangements.

Duke may consult with members of its faculty, the Research Office, or any other source in selecting a scientist. If the requesting activity has nominated a scientist, he will be considered and, if possible, selected. Now, as in the past, however, procedures state that authority for the selection and rate of compensation remains with Duke.

When preliminary negotiations with the selected scientist have been completed, Duke makes a proposal to the Research Office on the estimated cost to provide his services to the requesting activity. The Research Office reviews Duke's proposal, and, if accepted, the contracting officer provides an order to Duke for the services of the scientist. Duke then formalizes the employment arrangements with the selected scientist and provides notification of the arrangements to the Research Office and the requesting activity. As before, during performance of the services, Duke serves as the scientist's contact point and apprises the Research Office of any significant developments.

Funding arrangements for obtaining scientific services remain unchanged. Army activities or installations transfer funds to the Research Office to support requests for scientific services within a given fiscal year. The Research Office then obligates the funds to a Duke contract.

Scientists employed under the contracts submit travel vouchers directly to Duke. Vouchers for professional services are submitted to the using activity for verification. When the activity has verified the legitimacy of the claim, the voucher is forwarded to Duke. Duke reviews the vouchers for both travel and services and, if all is in order, pays the scientist. Duke then submits a bill to the Research Office for the services provided and receives reimbursement for costs incurred plus overhead, which during fiscal year 1970 was generally at the rate of 7.99 percent of the scientist's compensation.

Effects of revised procedures
on requesting activity

To determine how the new procedures were operating, we discussed them with personnel responsible for processing the requests for the Army Electronics Command laboratories at Fort Monmouth, New Jersey. During fiscal year 1970 Duke reimbursed more than 50 consultants for services rendered for the Electronics Command.

We were informed that the Electronics Command had specified the names of the individuals whose services were desired for all but one of the 22 requests submitted during calendar year 1970. The only one which did not specify a name was submitted after verbal instructions were received from the Army Research Office-Durham to discontinue the practice. Since this particular request was to arrange for continuation of the services of an individual, the name was made known to the Research Office by telephone.

Electronics Command personnel stated that the former procedure should be reinstated so that the requesting activity could ask for the scientist who had the special qualifications required to render the advice and assistance needed to solve the specific problem. In our opinion, the revised procedures appear to magnify Duke's role in the selection process; but, since the requesting activity can suggest names by telephone there is little substantive change in Duke's role.

Determination of pay rates

We were informed by Duke that it determined the fees paid to scientists on an individual basis. Duke does not use an established formula, except for its own faculty members and scientists hired for the summer cooperative program; rather, it determines the fees to be paid a scientist by considering the following factors developed through experience.

Current salary and/or position of the scientist

If a proposed consultant is an associate or full professor at a better known college or university, a fee of at

least $125 a day is allowed. This is reported to be the average fee for an associate professor at Duke.

Reputation and experience of the scientist

According to Duke, under this criterion a daily fee of more than $125 is allowed if the proposed consultant is recognized in his field or has some other qualification, such as long experience. A consultant with experience and a reputation for having expertise in a discipline can expect a higher fee than one without experience. Duke states that consideration is also given to the benefit derived from the scientist's previous services.

Type of service to be provided

Duke feels that a consultant hired for the purpose of consulting with a laboratory on a problem generally can expect a higher fee than a consultant used as a speaker or lecturer at a meeting.

Duke faculty members who work under Army Research Office-Duke contracts are paid according to established formulas, the amount depending upon whether the work is performed during the academic year or during the summer months. The formula governing compensation for Duke faculty members participating in Research Office work during the academic year allows the member compensation amounting to his regular academic year pay rate for approximately three fourths of the time worked and a consultant rate for approximately one fourth of the time.

Duke faculty members and principal research investigators of other colleges and universities who are hired under the Duke contracts for summer work at various Army installations and laboratories are paid in accordance with a similar formula. The formula is based upon the academic year pay rate plus an additional amount to make the pay commensurate with that received for teaching at a summer session, since summer teaching allows time for research as well.

Analysis of rates paid by Duke

Our analysis of daily rates paid by Duke in fiscal year 1970 showed that, excluding summer hires, about 60 percent of all consultants had received in excess of $125. About 41 percent of the scientists obtained from universities and 73 percent obtained from other sources were paid more than $125 a day.

Fiscal year 1970 activity

During fiscal year 1970 the Army Research Office-Durham reimbursed Duke approximately $2.4 million for costs incurred under 29 contracts issued pursuant to the basic ordering agreement. The costs were incurred by Duke in fiscal years 1969 and 1970 and included $1.3 million for payments to scientists; $100,000 for Duke's overhead on payments to scientists; $380,000 for travel, primarily by scientists; and $26,700 for salaries of Duke employees administering the contracts.

During this same period Duke paid about $1.5 million under 24 contracts for scientists' services and travel. Duke maintains payment cards on scientists hired under the contracts. A payment card is established for each order from the Research Office for Duke to procure the services of a scientist. For fiscal year 1970 there were 958 orders issued under 24 contracts. The same scientist may be involved with more than one order; therefore the orders do not represent 958 different scientists.

Daily rates paid in excess of GS-18 rate

Of the 24 contracts under which payments were made by Duke to scientists during fiscal year 1970, the daily rates paid in excess of the daily rate authorized for a GS-18 amounted to approximately $188,000. In analyzing the payments made under the 958 orders, we found that 415 had involved payments to scientists in excess of the GS-18 rate, 373 had involved payments within the GS-18 limitation, and 170 had involved no payments at all. The latter group included 131 scientists who did not charge for services

rendered and 39 who charged for their services but who did not submit claims for payment during fiscal year 1970. The number of orders and costs for each payment category are shown below.

Payment category	Number of orders	Services	Travel and incidental expense	Total	Amount in excess of GS-18
In excess of GS-18	415	$ 594,500	$151,700	$ 746,200	$188,100
Within GS-18	373	600,500	153,100	753,600	-
No fee paid	170	-	39,400	39,400	-
Total	958	$1,195,000	$344,200	$1,539,200	$188,100

On the basis of a cursory review of the orders under which no fees were paid during fiscal year 1970, it appears that many of the services provided at no cost involved planning, organizing, or participating in group meetings of a scientific nature.

Most of the individuals obtained under the 958 orders were from the academic community. Others were self-employed consultants or employees of private organizations.

Purposes for which scientists were hired in excess of GS-18 rate

Research Office officials described the following 12 general purposes for which scientists were hired under contracts with Duke.

Individual advisor
Review panel
Foreign scientist
Seminar
Working conference
Case study
Group study
Senior scientist steering group
Lecturer
Symposia
Army Research Office-Durham--Army Laboratory Research Cooperative Program
Technical evaluation

The purposes, as identified and defined by the Research Office, are set forth in appendix II.

Using the purposes, we categorized the 415 orders under which scientists had been paid in excess of the GS-18 rate during fiscal year 1970. We did not use the purpose of foreign scientist in our categorization. Instead, when the services of a foreign scientist were obtained, we categorized the order by the type of service provided.

In categorizing the 415 orders, all purposes were represented. Approximately 74 percent of the orders involving payments in excess of the GS-18 rate were to obtain scientists to serve as individual advisors to requesting activities. The number of orders for each purpose and the dollar amounts are set forth in the following table.

Purpose	Number of orders	Fee or salary	Travel and incidental expense	Total paid	Amount in excess of GS-18 rate
Individual advisor	306	$425,860	$109,765	$535,625	$122,892
Review panel	29	37,111	11,076	48,187	17,066
Seminar	4	650	261	911	134
Working conference	6	1,182	730	1,912	416
Case study	1	4,596	662	5,258	1,987
Study group	41	84,368	17,270	101,638	35,424
Senior scientist steering group	6	5,730	2,682	8,412	2,580
Lectures	6	6,107	765	6,872	2,115
Symposia	6	2,000	1,094	3,094	495
Army Laboratory Research Cooperative Program	4	19,262	3,426	22,688	3,333
Technical evaluation	6	7,606	3,971	11,577	1,675
Total	415	$594,472	$151,702	$746,174	$188,117

For individual examples of scientists hired by Duke to render services to Army activities, see appendix III.

In addition to providing for the amounts above, the contract entitled Duke to reimbursement from the Army for overhead costs on the fees or salaries paid to the scientists, generally at a rate of 7.99 percent. This would amount to approximately $47,500 on the professional fees or salaries listed above, but we did not determine the actual amount of overhead paid by the Research Office to Duke.

Army Research Office position on obtaining scientists through Duke

The Army Research Office-Durham maintains that it is essential that the term "uniquely qualified scientists"--those with whom its scientific services program is concerned--be clearly distinguished from the term "scientific experts and consultants" normally used in Government references. The Research Office defines the uniquely qualified scientist as one who is accepted as a recognized authority by his scientific peers; its definition does not conform merely to a legal definition.

According to the Research Office, the uniquely qualified scientist not only works in an advisory capacity but also actually participates in solving numerous problems above and beyond those associated with the normal meaning of the word "advisor." His duties consist primarily of expressing scientific facts and submitting recommendations in the form of a report upon extraordinary problems and questions presented to him for consideration. The Research Office-Duke scientific services program attempts to obtain scientists whose competence is not duplicated within the Army and whose services otherwise might be unavailable to the Army.

The Research Office considers its contracts with Duke to be research and development contracts with an educational institution, not personal services contracts. Consequently, the Research Office does not consider the contracts subject to the pay rate limitations of 5 U.S.C. 3109, as set forth in section 22 of ASPR. Instead, the Research Office contends that reimbursement to Duke for costs incurred under

such contracts is governed by the section of ASPR (section 15, part 3) which provides that costs for personal services applicable to research and development grants and contracts with educational institutions be allowable to the extent that the total compensation to individual employees is reasonable for the services rendered and conforms to the established policy of the institution, consistently applied.

Although the Research Office contracts with Duke for scientific and technical assistance, Research Office officials felt that it would be a misstatement of fact to say that they used Duke to obtain experts and consultants. They stated that the contract with Duke covered many scientific and technical services other than the services of uniquely qualified scientists and that each action taken in obtaining these services was accomplished with, and depended upon, the advice, assistance, and influence of the contractor in the academic community. Our analysis showed, however, that 60 percent of the amount reimbursed to Duke was for the cost of obtaining the services of scientists. (See p. 11.)

In the opinion of Research Office officials, a contract with Duke is the only feasible method of obtaining the services of recognized authorities to assist the Army in critical research and development problems whose success or failure may hinge upon instant application of outstanding scientific competence. Also, we were told that, in numerous individual instances, the benefits received by the Government from services rendered by a scientist obtained through Duke had far exceeded the cost of the services. For further discussion of the claimed advantages of using contracts with universities, see chapter 4.

REVISIONS TO ARMY-DUKE BASIC AGREEMENT

In May 1970 an official of the Office of the Judge Advocate General of the Army informed us that, although the individual hired by Duke for the Army is the type who commands high pay and will not work for a lesser amount, there was no distinction between Duke's term "outstanding and uniquely qualified scientists" and the customary term "consultants and experts." He stated that the work obtained from Duke usually had an end product, such as a report on the services rendered.

The official expressed the desire of the Army to develop a contract with Duke that properly would reflect the procedures actually followed. The contract would provide for issuing task orders to Duke, specifying a scope of work for the investigator, and requiring Duke to submit an end product whenever appropriate. The General Accounting Office has recognized that task orders requiring an end product are not the type of expert and consultant contracts subject to the GS-18 limitation. The official said that the Army also would continue to attempt to obtain consultants through regular civil service procedures within the GS-18 limitation.

On October 30, 1970, a new basic agreement was entered into by the Army Research Office-Durham and Duke.[1] There are two principal differences between the revised agreement and the agreement that was in effect from 1961 until the revision. First, the revised agreement and the contracts to be issued thereunder state that their purpose is to provide for nonpersonal research services. The old agreement did not specify nonpersonal services even though many of the scientists' services included reports or other end products to be submitted to the requesting activities.

Second, Duke is required to furnish a report on each individual task order upon completion of the effort,

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[1] According to recent newspaper reports, Duke intends to end its arrangements with the Army at the end of this academic year.

including a description of the service rendered and financial information. In the past Duke required this information from the consultant as a condition of payment, but there was no requirement for Duke to furnish it to the Army.

Reporting requirements in effect in fiscal year 1970

Reporting requirements of the Army-Duke contracts active in fiscal year 1970 pertained to progress reports and technical reports to be submitted by Duke at the instruction of, or upon agreement with, the contracting officer. With certain exceptions the contract terms did not specify the frequency, format, or recipients of reports required and did not indicate a time limit for final technical reports. The contract provisions did not mention reports required from experts and consultants.

Army Research Office officials said that they did not require reports on work performed from the scientists hired under the Duke contracts. We reviewed approximately 170 authorizations issued by the Research Office for Duke to hire scientists and noted no specific requirement for a report from the scientist on the results of his work. The officials stated, however, that the activity using the services of the expert or consultant had requested a report from the individual in specific cases. We were told that written reports could be obtained from scientists serving as individual advisors, review panelists, study group members, and technical evaluators and that oral comments or recommendations might be requested of individual scientific advisors.

At the Army Electronics Command, we determined that nine of 11 consultants sampled had been required to submit technical reports or other technical data to the requesting activities as a part of the services performed. In the other two cases, we found that the laboratory scientists had visited the consultants at their places of business for 1-day consultations and that the information or advice obtained had been documented by the scientists in their trip reports.

Duke required that the scientist include a statement of work performed, endorsed by the requesting activity, on

his request for payment. This statement--usually one or two sentences in length--along with financial information, constituted the extent of reporting made to Duke by the expert or consultant.

Revisions in reporting requirements

Under the revised basic ordering agreement between the Army Research Office-Durham and Duke, a report on each individual task order is to be furnished by Duke to the Research Office upon completion of the individual effort. The report is to include a description of the services rendered under the contract or task order and the amount paid for such services, including travel, per diem, and any other expenses. The agreement also provides that, at Duke's discretion, special or interim reports may be issued.

Duke, in turn, has revised its form to provide space for an expanded statement of accomplishment of the task performed, to be verified by the requester and to be submitted by the scientist with his voucher.

Conclusions

It is our opinion that the revised basic agreement of October 1970 permits negotiation for only nonpersonal research and scientific and technical services, with each procurement to be covered by a formal task order document. Therefore, if, in fact, a task order were for specific research or development and for the delivery of an end product or report, the compensation limitation in 5 U.S.C. 3109 would not apply.

In the past, under the basic agreement of June 1961, Duke on many occasions acted as only an intermediary in procuring the services of particular scientists (not attached to Duke) desired by Army activities. Contrary to the Army's contention, we believe that this is not the type of service contemplated by the sections of ASPR pertaining to services of educational institutions. Rather, it is our view that the services involved are primarily those of experts and consultants.

Although the new agreement requires Duke to furnish a report on each individual task order, such requirement does not have the effect of altering the nature of the services to be performed by Duke under the agreement. Essentially, Duke continues to serve as primarily an intermediary in procuring the services of experts and consultants for the Army, and such services should be procured under the authority of 5 U.S.C. 3109. Under that statute, however, only when the services are personal rather than nonpersonal is the compensation limited to the GS-18 rate.

If the services to be obtained under the task orders were services which would be considered personal services if obtained by direct contract or hire and which therefore would be subject to the compensation limitation of 5 U.S.C. 3109, the use of Duke as an intermediary in procuring the services would be ineffective in removing the limitation. The situation is to be distinguished from one in which a contract is made with a college or university to perform a substantive task or definite work for the Army--not for the primary function of furnishing personnel only.

The Comptroller General has consistently ruled that, when an individual is responsible for an end result free of the supervision or control of the Government, which is usually the case in employer-employee relationships, he may be regarded as an independent contractor rather than as an employee. Such services are nonpersonal and, to the extent authorized, should be procured by contracts which specify rates and conditions applicable to nonpersonal services.

Therefore, in our opinion, rates paid to consultants obtained by Duke under the revised basic agreement would not have to comply with 5 U.S.C. 3109 if the services to be performed by the consultants were actually nonpersonal. It will be necessary for the Army and Duke to abide by the terms of the agreement and to contract only for specific research or development tasks or for the furnishing of a completed product, rather than for the personal services of an individual.

Matter for consideration by the Committee

The applicability of the present statutory limitation is difficult to ascertain in many instances, especially when the determining factor is whether the service wanted of the individual is primarily personal and a report or other end product is incidental to the service or the service is primarily for the procurement of a report or other end product and therefore is nonpersonal. A redefining of the services intended to be restricted by 5 U.S.C. 3109 would appear to afford a firmer basis for monitoring adherence to the statute.

CHAPTER 3

NAVY AND AIR FORCE MAKE LIMITED USE OF CONTRACTS WITH ORGANIZATIONS TO PROVIDE EXPERTS AND CONSULTANTS

DEPARTMENT OF THE NAVY

In response to our inquiry, the Navy listed 50 contracts which contained provisions for advisory assistance to be furnished as part of the work to be performed. The list included 42 contracts awarded by the Office of Naval Research under DOD's Project THEMIS. The Office of Naval Research advised us that all THEMIS contracts had contained a clause to the effect that occasional advisory assistance could be provided by faculty members and graduate research assistants engaged in THEMIS research, when requested by DOD. The Navy subsequently informed us that no such services had been provided to DOD by any of the Navy's THEMIS contractors.

Two of the contracts identified by the Navy were with not-for-profit research institutions. Our examination indicated that no consultants had been used under one of these contracts and that the payments made for consultant services under the other contract had been for services rendered directly to the contractor. The remaining contracts were awarded by the Office of Naval Research to the Smithsonian Institution and the American Institute of Biological Sciences and provided for furnishing the Navy with expert and consultant assistance in scientific fields. None of the individuals received more than $100 a day for their services.

Under one contract the Smithsonian provided advisory and consultant services in support of the Naval Research Advisory Committee and its various laboratory advisory boards. Fees for advisory services were $100 a day for individuals who attended meetings as members or invitees, although some served without fee. Another contract with the Smithsonian provided the Navy with expert assistance and consultant services in support of the Navy's psychological sciences

research. Consultants were paid from $50 to $100 a day. For both contracts the Navy reimbursed the Smithsonian for fees, travel, and subsistence paid to consultants and for overhead incurred in performance of the contract.

Under a third contract the Smithsonian provided marine sciences advisory and consultant services to the Navy. The Smithsonian provided three employees at pay rates of about $60 to $90 a day. Reimbursements by the Navy to the Smithsonian included employee fringe benefit costs and overhead.

A similar series of contracts with the American Institute of Biological Sciences provided the Navy with individuals who performed various scientific and technical services. For studies of shark biology, including attendance at a workshop conference, awards of $50 a day were paid to six individuals for 12 days of service. For technical and consultant services to a biological research program, fees ranged from $50 to $100 a day, most at $75 a day.

Scientists performing analysis evaluation and dissemination of information on a physiology program received awards of $50 a day. Advisory consultants in biomedical research received awards ranging from $20 to $80 a day. Two individuals performing similar services in marine biology each received a $25 award. In each instance the Navy reimbursed the American Institute of Biological Sciences for fees, travel, and subsistence incurred by the advisors and for the Institute's overhead.

DEPARTMENT OF THE AIR FORCE

The Air Force informed us that its research and development activities had made limited use of contracts with organizations to obtain experts and consultants and that there were no current contracts for assistance under which payments exceeded statutory limitations.

To verify this, we examined more than 50 Air Force contracts which contained statements of work under which the services of experts and consultants could have been obtained by the contractor for the Air Force. We could find no arrangement, however, similar to the Army-Duke arrangement under which organizations provided the services of experts and consultants to Air Force activities at rates in excess of those authorized.

We reviewed 36 contracts issued by organizations of the Air Force Systems Command at Wright-Patterson Air Force Base, Ohio, We found that 32 of these contracts awarded to university and commercial research organizations were for specific research and/or experimentation resulting in end products. When consultant service was required under these contracts, the service was obtained by and rendered directly to the contractor. The other four contracts were for similar services, except that they also provided for certain intermittent services to be furnished to Air Force activities by the contractor.

A contract with the Ohio State University Research Foundation to provide intermittent research analysis and technical assistance on materials called for the expert guidance and advice of metallurgists, chemists, physicists, and materials engineers. Generally, technical research was involved; and a report, pamphlet, or booklet was required as the end product. The principal exception was for the services of lecturers provided to the Air Force by the Research Foundation under the contract. During fiscal year 1970 15 requests for lecturers were made under the contract. Fees paid to these lecturers ranged from none to $250 a day. Eight of the lecturers received $145 or more a day, which exceeded the GS-18 limitation ($136 a day) in effect at the time of the payment. The lecturers also received reimbursement for travel costs.

ASPR considers a lecture to be a nonpersonal service in which an individual delivers a lecture without Government supervision, the same as a level-of-effort research and development contract performed independently of Government direction, supervision, and control. The lecturers were selected by representatives of the Air Force Materials Laboratory, and the rate was set to ensure the availability of the eminent lecturer desired.

The Ohio State University Research Foundation terminated this contract on December 31, 1970, taking the position that the service provided under this type of contract did not meet the academic objectives of the university.

A similar contract with the University of Cincinnati Institute of Space Sciences provided the Air Force Aerospace Research Laboratories with intermittent research efforts, studies, surveys, and lectures related to physical and mathematical sciences. Under this contract 69 requests for lecturers were filled. Most of the lecturers received $50 to $75 a day, and in only one instance did the lecturer receive a fee in excess of the GS-18 rate.

Under a contract with the University of Dayton, the Aerospace Medical Research Laboratory had research performed and lecturers provided. All lecturers under the contract received rates of pay which were less than the GS-18 rate.

Another contract with the University of Dayton Research Institute for research studies and experiments included three instances of providing consultants to review and evaluate work at the Air Force Flight Dynamics Laboratory. In these instances a written report or a letter report was required. Although the rates paid to these consultants exceeded the GS-18 rate, the GS-18 limitation was not considered applicable because the tasks required the furnishing of end products.

We also examined 15 contracts issued by the Air Force Office of Scientific Research which contained general provisions under which some use of experts and consultants could have been made. But most of the contracts were for specific purposes and did not involve the intermittent furnishing of experts and consultants to the Air Force.

Four of these contracts, three with universities and one with a mathematics society, called for the contractor to perform study and research for the Air Force in general fields of engineering sciences, chemistry, geophysics, and mathematics, respectively. Evaluation and consulting services were provided in the nature of (1) evaluations of research proposals, papers, and reports; (2) assembling of evaluation panels; and (3) assistance and advice. Although these four contracts had been used by the Air Force in the past, they were terminated prior to, or were inactive during, fiscal year 1970 and no payments for expert and consultant assistance were made.

Another contract authorized the procurement of consulting services from a contractor to make a study and submit a report to the Assistant Secretary of the Air Force. The work was not research and was funded from operations and maintenance funds rather than from research and development appropriations.

Four other contracts that we examined were for scientific research with universities. These contracts were awarded under DOD's Project THEMIS. Although they contained standard clauses providing for occasional advisory assistance to DOD, their principal purpose was for research.

Under two contracts issued by the Air Force Office of Scientific Research and under one issued by the Air Force Systems Command, the National Academy of Sciences provided scientists for planning, conducting, and evaluating Air Force postdoctural research associateship programs. These were cost-reimbursement contracts and required reports from the National Academy of Sciences. Consultant services were not furnished directly to Air Force activities.

We also looked into four contracts which the Air Force designated as contracts for research but which were more in the nature of support of operations. These contracts were issued by the Air Force Office of Scientific Research on behalf of the Operations Analysis Office, Chief of Staff, Air Force Headquarters. Each contract provided for a cadre of scientific or engineering experts from academic institutions to be available to the Department of the Air Force as consultants on special problems pertaining to the full

spectrum of Air Force mission, function, and organization. The consultants worked directly with the staff of the field command or unit. The end product of each contract was a report on the services performed. The maximum daily compensation which could be reimbursed was $92 a day.

According to the Operations Analysis Office, in fiscal year 1970 it received 3,131 man-days of consultant support from approximately 70 experts under the four contracts. The average daily cost, including salary, overhead, travel, per diem, and miscellaneous expenses, was $106 a day. The contracts were funded from operations and maintenance appropriations. Because of budget restrictions, these contracts are not being renewed and ongoing projects are being completed expeditiously.

CHAPTER 4

DOD'S REASONS FOR USING ARMY-DUKE TYPE OF CONTRACTUAL ARRANGEMENTS

We asked DOD to provide us with a position statement for any administrative constraints which make the use of contractual arrangements with outside organizations preferable to the appointment or direct-hire method of obtaining the services of experts and consultants. The Director of Defense Research and Engineering replied by letter on September 14, 1970. (See app. IV.)

USERS CITE QUICK RESPONSE TO URGENT NEEDS

The Director of Defense Research and Engineering included the following comments in his letter.

> "This contractual service does not substitute for, but is a supplement to the appointment procedures to meet the DOD's needs in cases of urgency or critical, highly specialized situations.
>
> "Appointment of consultants under regular procedures is used in those cases where a relatively long term need for a particular expert can be forecast in advance and firm arrangements made with him for his availability. In those cases where unforeseen problems requiring the best in scientific or technical ability arise and appropriate experts are not available through existing consultant appointments, DOD Agencies may utilize a contractor, generally a university. The contractor is normally responsible for the assessment of the requirement and the provision of the appropriate scientific expertise for solution of the problem."

In the opinion of the Army Research Office-Durham, neither a personal services contract nor a Civil Service Commission appointment would be sufficiently responsive when high-priority demands required urgent advice. An agency

official stated that the majority of requests for scientific services received by the Research Office required assistance to be provided within 2 weeks and that existing Government employment procedures would not permit such an immediate response. Timeliness is considered so crucial by agency officials that it is cited as the primary justification for the Duke contracts.

We did not make a detailed analysis of orders for services of scientists to determine whether they were urgently needed on short notice. During a cursory review of 29 orders selected at random from 415 orders for scientists paid in excess of the GS-18 rate during fiscal year 1970, however, we noted 13 instances in which the scientists began work within 14 days after the requests were received by the Research Office, two in which services were provided within 15 to 30 days, and four within 31 to 60 days. For the remaining 10 requests, the scientists did not begin work for 60 days or more after the Research Office received the requests.

We observed that 12 of the 29 orders for scientists' services did not specify the actual dates when the services would be needed by the requesting activities. Instead, the requests were made for scientists' services for a certain number of days at some time during the subsequent 1-year period. Two other orders were received by the Research Office 85 and 151 days prior to the dates for which the scientists were needed.

At the Army Electronics Command, we looked at 21 requests for assistance submitted to the Army Research Office-Durham during fiscal year 1970. Two requests were for urgent assistance, and one asked that the services commence within 1 month from the date of the request. Sixteen of the requests were for the Research Office to arrange to have the services of scientists available for a specified number of days, usually 20, during an ensuing period, usually 1 year. The records which we examined did not give any indication of the urgency of calls subsequently made on the scientists during the term of these arrangements. The remaining two scientists were engaged as summer scholars.

It thus appears that the use of the Duke contract to employ consultants for Army activities is not confined to urgent cases.

We asked several Air Force contracting officials who had made limited use of university contracts whether this method was significantly faster and easier to use than obtaining experts and consultants directly. Representatives of both the Air Force Office of Scientific Research and the Aeronautical Systems Division agreed that the university arrangement was preferable because the processing of many individual contracts was eliminated and because universities were more aware of qualified individuals and their availability.

The executive officer of an operations analysis project which had used four university contracts extensively (see p. 30) told us that using university consultants was more economical and practical than contracting directly. It should be noted that the rates paid by the Air Force for experts and consultants under its contracts did not exceed the rates authorized by statute.

The officer added that the procedures required to contract directly with consultants were time consuming and cumbersome. He stated that it might require from 60 to 90 days to obtain the information necessary to complete the appropriate forms and to process them for approval through the various command echelons to the Air Force Chief of Staff or the Secretary of Defense. We were told that the Chief of Staff must approve the request before a consultant could be approached to determine if his services were available.

If the consultant is to be appointed for a relatively long period of time, approval of the Secretary of Defense is required. The elapsed time of from 60 to 90 days is in contrast to the 2 to 3 weeks required to obtain university consultants.

We also were told that it would have been physically burdensome, if not impossible, for the Air Force Office of Scientific Research to have processed individual contracts for the services of the 70 consultants employed during fiscal year 1970 under the four aforementioned contracts.

UNIVERSITIES SAID TO HAVE
EASIER ACCESS TO SCIENTISTS

The Department of Defense official stated in his letter of September 14, 1970, that:

> "Contracts are written for consultant services to obtain the best technical assistance possible, usually from people who could not be hired full time. Specifically, the thrust of the contract is not to provide bodies but to provide expert technical service.
>
> "The DOD Agencies generally obtain these services through a university contract because of the favorable standing of the university in the scientific community and its knowledge of the personnel available and their qualification. The hiring of the scientific personnel is done in accordance with established academic consultant policies."

In our opinion, DOD's stated purposes for the Army-Duke arrangement seem identical to the purposes for appointment or direct-contract procedure.

In the opinion of the Army Research Office-Durham officials, another major justification for obtaining these services through a university contract, in addition to a quick response, is Duke's name and prestige in the academic world. They believe that this enables the Government to obtain the services of outstanding scientists who might not otherwise be obtainable. The Research Office does acknowledge that Duke's influence is a highly subjective factor, the effect of which cannot be measured.

In regard to this contention we were told by the Duke representative responsible for negotiating scientific services under the contract that, in his opinion, few, if any, scientists would be swayed by Duke's prestige and that scientists who worked for the Government or the military did so regardless of whether they were employed directly or by a separate organization, university, or other institution.

Research Office officials also feel that Duke's personal approach and relatively simple administrative procedures are influential in obtaining the services of outstanding scientists. Specifically, they feel that some scientists may be less inclined to work directly for the Government because of the longer, more tedious employment applications and forms required and because of the less rapid method of payment.

An Air Force officer cited the Air Force's greater flexibility in obtaining a higher quality of expert services in a more diverse range of disciplines as an advantage for the university arrangement. Also, he stated that the university serves as a single point of contact for knowing where expert services are, ensuring that the services are provided in accordance with the terms of the contract, and taking prompt corrective action if the services are unsatisfactory.

Matter for consideration by the Committee

The position of DOD that its agencies, for the reasons noted above, generally utilize a university contract to supplement appointment procedures to meet their needs for experts and consultants was not substantiated by our review. The Navy and Air Force informed us--and our review confirmed--that they made limited use of such arrangements. (See ch. 3.) It appears that the Army is the only DOD activity that finds it necessary to significantly supplement its in-house research and development activities with experts and consultants obtained through contracts with a university or other outside contractor for that specific purpose.

DOD CONTENDS COSTS ARE NEARLY THE SAME

The Defense official informed us that, in most cases, experts and consultants obtained by the university arrangement cost about the same as appointed consultants. His letter stated that:

> "The contractor selects the scientific personnel and negotiates their fees within the normal going rates for such short time services. In most cases, the net pay is approximately the same as that paid appointed consultants, since the contract personnel are paid only for actual days served while appointed consultants are paid portal-to-portal."

The Department of the Army inserted into the record of hearings on DOD appropriations for 1971 (House of Representatives, part 6, p. 239) a statement that:

> "*** a quick review of fiscal year 1969 expenditures by Duke indicates that overall costs for scientific and technical services were reasonable. Duke, through its position within the scientific community, was able to obtain approximately 17 percent of the individuals at no charge except travel expenses.[1] Duke did find it appropriate and necessary to pay somewhat less than half of the individuals at rates over $128 per day to obtain the unique or specialized skills required. It appears that about half of these were actually paid less than $128 per day if travel time were considered. Overall, the average pay on a portal-to-portal basis was below $128 per day."

This statement was based on a study made by the Army of the amounts paid by Duke for experts and consultants

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[1] Many consultants employed directly by the Government also serve without compensation. See p. 42.

during fiscal year 1969. The Army made certain assumptions and recomputed the costs to arrive at the amount it estimated that these consultants would have cost had they been appointed. The Army calculated that it would have cost about $50,000 more to obtain these consultants through civil service appointments than through actual payments made through Duke, as follows:

Actual cost to Duke for obtaining consultants		$1,000,799
Army assumption that all compensated civil service appointees would receive $128 a day:		
Decrease for amount of Duke payments in excess of $128 a day	$198,402	
Increase for amount of Duke payments below $128 a day	95,350	
Net decrease		103,052
Assumed payments for all Duke consultants at $128 a day		897,747
Army assumption that all compensated civil service appointees would have been paid while in travel status:		
Over 1200 days at $128 a day		154,157
Army estimate of cost through civil service appointments		$1,051,904
Army estimate of savings through Duke arrangement		$ 51,105

Our analysis questions the validity of the Army's computation. First, the Army assumed that every consultant obtained through the civil service appointment method, other than those serving without compensation, would have received the maximum rate which could be paid. Many Government consultants are paid less than the maximum rate and,

in fact, Duke in 1970 did not pay the equivalent of the GS-18 rate to nearly one half of the scientists compensated.

In estimating costs to the Government during fiscal year 1969, the Army used $128 as the equivalent GS-18 rate. The maximum which could have been paid by the Government during that period, however, was $107.68 until February 1969 and $116.32 for the remainder of the fiscal year. If it is assumed that DOD would have paid every consultant the maximum allowed and if it is further assumed that the maximum averaged out to $112 for the year, the most that could have been paid would have been $785,529 instead of $897,747.

We also noted that the amount added for pay during time spent in travel was the principal reason that the Army estimate of the Government costs was higher than the actual Duke costs. If all of the consultants had been hired under civil service appointments and had been paid for the time spent in travel, which is unlikely, the cost at the rate of $112 per day would have been $134,887. Therefore, the maximum estimated cost would be as follows:

Consultants compensated by Duke, refigured at $112	$785,529
Travel time for every consultant, computed at $112	134,887
Maximum cost of civil service appointment method	$920,416

Therefore, even if all of the assumptions made by the Army were accepted, the amounts paid by Duke exceeded the cost that would have been incurred for direct hire by the Government by more than $80,000.

Government regulations permit pay-while-in-travel status; practices of defense agencies not consistent

The principal factor in the Army's claim for lower costs through the Duke arrangement is its contention that the Government pays consultants for all time spent in travel and Duke does not. Therefore, we extended our examination to determine whether, in fact, DOD agencies do pay experts and consultants on a portal-to-portal basis.

Civil Service Commission guidance to Federal agencies, which is suggestive but not authoritative, states that an expert or consultant is not to be paid for days during which he performs no services but which he spends traveling between his home or regular place of business and his place of Federal employment. The guidance further states, however, that pay for these days can be justified by unusual circumstances in individual cases.

Our inquiries have shown that members and consultants of the Defense Science Board and consultants to the Advanced Research Projects Agency are compensated for a full day if less than 8 hours of service is provided, whether they travel or not. No compensation is allowed members and consultants for days of travel when no service is provided. The Naval Research Advisory Committee compensates a member $50 for each day or part of a day he attends any regularly scheduled meeting. This practice would not permit compensation to members for travel time except when travel coincided with meeting dates.

On the other hand, the Army Scientific Advisory Panel compensates its members and consultants for travel days and for days of less than 8 hours of service. The Air Force Scientific Advisory Board normally pays for a full day as long as some service is provided. In fiscal year 1970, however, one member requested compensation for days when only travel was performed and was compensated for those days.

We were told by an official of the Army Electronics Command that consultants obtained by that organization through excepted civil service appointment were not paid while in travel status.

Defense contractors receiving our questionnaire on consultants' compensation (see ch. 6) were not queried specifically on the matter of pay while traveling. Replies from 12 contractors, however, included information which gave an indication of their policies regarding such pay. Two of them pay fees to consultants for travel taking place during normal working hours; the other 10 pay only for time actually worked.

Conclusion

Whether compensation is payable under 5 U.S.C. 3109 for time spent in traveling between the expert or consultant's home or regular place of business and his Government duty station depends upon the specific terms of his contract of employment. The Comptroller General has held that it is within administrative discretion to provide by contract for the payment of compensation for travel time.

The failure to pay compensation for travel time, however, could not serve as a basis for paying a daily rate of compensation higher than the maximum rate permitted by statute. Also, the Army's assumption that all of the consultants employed by Duke would have been paid travel time if the Government had employed them was not substantiated by our review. We, therefore, question the 100-percent use of this cost in the Army's computation of "savings" through the Duke contract.

Matter for consideration by the Committee

It is within an agency's administrative prerogative to compensate consultants for time spent in travel status. Agencies conceivably can use these payments to bring Government compensation closer to the consultant pay that is common outside of the Government. In considering the need for flexibility in limitations on compensation for consultants (see p. 49), we believe that it should be recognized that a certain amount of flexibility already exists by virtue of agencies having the option to allow consultants their established rate of pay for time spent traveling to and from the site of their Government employment.

CHAPTER 5

MAXIMUM CONSULTANT RATES NOT PAID TO ALL DEFENSE SCIENCE ADVISORY COMMITTEE MEMBERS

DOD employs scientists on an intermittent basis to serve on its public science advisory committees and boards. The individuals are employed by excepted appointments in accordance with the agreement between the Civil Service Commission and DOD for obtaining the services of experts and consultants.

DOD Directive 5030.13, dated April 1962, states that the term "advisory committee" includes any committee, board, commission, council, conference, panel, task force, or similar group or subgroup that is formed in the interest of obtaining advice or recommendations, or for any other purpose, and is not composed wholly of officers or employees of the Government.

The rates of pay awarded to these scientific advisory committee members in fiscal year 1970 varied among the different committees. In no instance did the rate of compensation exceed the amount authorized by statute, and in many instances the committees did not allow the maximum rate authorized.

DEFENSE SCIENCE BOARD

The DOD Defense Science Board consists of a chairman, a vice chairman, and 25 other members drawn from Government, industry, universities, and nonprofit research organizations. A list of Board members[1] published in April 1970 showed that four were employed by Government agencies and offices, eight were employed by industrial organizations, seven were

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[1] "Members of Public Science Advisory Boards," Washington, D.C., April 1970, compiled by the Executive Secretary, Naval Research Advisory Committee.

associated with universities, and seven were from Government-sponsored or Government-affiliated nonprofit organizations. One member listed no affiliation.

Eight of the Board members also served on one of the military service scientific advisory committees, and two members served as advisors to two of the services. The membership included the Vice Chairman of the President's Science Advisory Committee and the Chairman of the Atomic Energy Commission's General Advisory Committee.

During fiscal year 1970, six members of the Board were paid for 42 days of work at $128 a day, the maximum allowable for temporary or intermittent employment of experts and consultants under 5 U.S.C. 3109 and authorizing appropriation statutes. These six were all associated with universities. No other members were paid for days worked.

In addition the Board paid 12 individuals for serving on its task forces during 1970. These consultants worked 96 days, with daily rates of pay ranging from $65 to $128, all within the statutory limitation. The average daily rate paid was $96. Other consultants worked without compensation.

ARMY SCIENTIFIC ADVISORY PANEL

The 21 members of the Army Scientific Advisory Panel worked 385 days in 1970. Eight members served wholly without compensation for a total of 147 days. The other 13 members, including two who contributed 35 days of service without compensation, were paid for 203 days of work at a daily rate equivalent to the GS-18 rate in effect at the time. Panel members were paid for 5 days of work at $116.32 a day, for 178 days at $128.80 a day, and for 20 days at $136.50 a day. Panel members, therefore, when compensated, received the maximum allowed by statute for intermittent employment of experts and consultants.

AIR FORCE SCIENTIFIC ADVISORY BOARD

The Air Force Scientific Advisory Board had 63 members who worked a total of 687 days in fiscal year 1970. For 409 of the days, members served without compensation. For those

days that members were compensated, they received a daily rate equivalent to the top level of GS-15 of the civil service salary schedule. For 48 days of work, members were compensated at a daily rate of $99.88, and, after rates were adjusted to reflect the general pay raise of July 1, 1969, they were compensated for 230 days at $107.92 a day.

NAVAL RESEARCH ADVISORY COMMITTEE

The Navy is required by public law enacted in 1956 to pay the 15 members of its Naval Research Advisory Committee no more than $50 a day for their services. This statute (70A Stat. 291) provides, in part, that:

> "The Secretary of the Navy may appoint a Naval Research Advisory Committee consisting of not more than 15 civilians preeminent in the fields of science, research and development work.
>
> * * * * *
>
> "Each member of the Committee is entitled to compensation of $50 for each day or part of a day he attends any regularly called meeting of the Committee and to reimbursement of all travel expenses incident to his attendance."

During 1970 the Navy paid its committee members at a daily rate of $50 for 106 days worked which included regularly scheduled meetings and additional services provided to the Navy.

Matter for consideration by the Committee

We were informed that members were willing to serve at rates below their customary fees because of their devotion to the nation and because of the prestige associated with membership on the science boards. Nevertheless, the inconsistencies in the daily rates of pay allowed for the public members of the various scientific boards and panels seem to warrant consideration, especially in the case of the Naval Research Advisory Committee where compensation is limited to a rate established nearly 15 years ago.

As a result of the current policies fixing the differing rates of pay, one scientific advisor received $128 for a day of service to the Defense Science Board and $50 for a similar amount of service to the Naval Research Advisory Committee.

CHAPTER 6

MOST RATES PAID BY DOD CONTRACTORS EXCEED AUTHORIZED GOVERNMENT RATES

Our analysis of information submitted by contractors holding DOD research and development contracts indicated that the rates paid by them for consultants generally were higher than the rates authorized for payment by Government agencies and were comparable to the rates paid by Duke.

The rates of pay reported in this chapter must be considered as representing a composite of rates voluntarily made available to us by DOD contractors. There are many undetermined factors which might have had a bearing on the rates paid, such as whether the consultant was donating a portion of his time, whether he was semiretired, or whether he was unusually outstanding in his field. Also, our categorization of the services and sources of consultants is based on our interpretation of the information furnished by various organizations and, therefore, may be subject to question. We believe, however, that the data give a substantive view of consultant rates paid by Defense contractors.

Of the 89 contractors responding affirmatively to our questionnaire about their use of consultants, 70 returned detailed information on their recent use of 892 consultants, including the amounts paid. The data included the experience of commercial, not-for-profit and educational organizations, as follows:

Type of organization	Number of contractors	Consultants employed	Average daily rate
Commercial	49	516	$158
Not-for-profit	12	302	133
University	9	74	124

The maximum daily rate authorized to be paid by Government agencies during most of fiscal year 1970 for engineering services or for services involving the physical or natural sciences was $128.

During fiscal year 1970, Duke paid consultants obtained for its Army contracts, with the exception of the summer-hires program, an average of $158 a day, the same rate which the commercial organizations paid, on the average, for their consultants.

The range of rates paid by DOD contractors is shown below.

Employer	Number of consultants employed	Daily rates of pay: Less than $125	$125 to $224	$225 and over
Commercial	516	28.9%	60.8%	10.3%
Not-for-profit	302	36.3	62.4	1.3
University	74	52.6	40.6	6.8
All organizations	892	33.4	59.6	7.0

No consultant received more than $250 a day from a university, although a not-for-profit contractor paid one consultant $300 a day. Two consultants were paid at a daily rate of $400 and one consultant received $500 a day from commercial firms.

We grouped the 892 consultants into 15 categories of consultant services. The following table shows the average rate of pay and the number of consultants used in each service category by each of the three types of contractor.

Consultant service category	Commercial	Nonprofit	University	Combined
1. Aeronautics/astronautics:				
Average rate of pay	$156	$153	$100	$152
Number of consultants	72	17	6	95
2. Atmospheric sciences:				
Average rate of pay	$120	$ 93	$ -	$105
Number of consultants	5	6	-	11
3. Chemistry:				
Average rate of pay	$146	$158	$ -	$153
Number of consultants	7	9	-	16
4. Earth and oceanography:				
Average rate of pay	$165	$109	$105	$144
Number of consultants	13	7	1	21
5. Electronics, electrical engineering (including ADP):				
Average rate of pay	$142	$110	$127	$129
Number of consultants	73	46	15	134
6. Energy Conversion, Fuels, and Propulsion:				
Average rate of pay	$152	$142	$103	$145
Number of consultants	15	5	2	22
7. Materials:				
Average rate of pay	$165	$140	$138	$149
Number of consultants	23	40	2	65
8. Mathematics:				
Average rate of pay	$142	$118	$144	$133
Number of consultants	23	19	7	49
9. Mechanical, industrial, civil, and marine engineering:				
Average rate of pay	$152	$117	$146	$145
Number of consultants	72	18	12	102
10. Military sciences:				
Average rate of pay	$152	$129	$ -	$139
Number of consultants	24	26	-	50
11. Navigation, communication, detection, countermeasures:				
Average rate of pay	$147	$139	$138	$145
Number of consultants	39	13	2	54
12. Physics:				
Average rate of pay	$162	$139	$109	$149
Number of consultants	81	40	16	137
13. Report preparation, review:				
Average rate of pay	$199	$150	$ 87	$183
Number of consultants	21	1	3	25
14. Communications Research (all one contractor):				
Average rate of pay	$ -	$159	$ -	$159
Number of consultants	-	39	-	39
15. Miscellaneous:				
Average rate of pay	$196	$115	$124	$170
Number of consultants	48	16	8	72
Total--all consultants:				
Average rate of pay	$158	$133	$124	$147
Number of consultants	516	302	74	892

Not all the respondents furnished sufficient detail for us to determine the source from which the consultant had been obtained. We analyzed the information available from 69 contractors on 655 consultants for comparison with Duke payments.

Source of consultant	Average daily rates paid by Commercial Number	Commercial Rate	Nonprofit Number	Nonprofit Rate	University Number	University Rate	Duke Rate
University	221	$154	202	$138	38	$128	$143
Self-employed	38	149	35	122	2	118	156
Commercial firm	83	192	19	153	13	119	203
Nonprofit	2	118	-	-	-	-	235

Almost all firms obtained their experts and consultants through direct hire. Of the 89 contractors who reported the use of consultants, only two appeared to hire their consultants solely through an outside consulting firm. Of 26 contractors that used both direct hire and outside organizations, 18 used predominately the direct-hire method.

In addition to paying for services, most of the contractors reimbursed the consultants for travel costs, mileage, and reasonable living expenses (either actual or per diem).

CONCLUSIONS

The average daily rates paid by commercial and not-for-profit contractors exceeded the authorized Government maximum. Universities paid their consultants an average just under the maximum.

Commercial organizations paid consultants the same average daily rate that Duke paid ($158). When considering the source of consultant assistance, on the average Duke paid higher rates than other universities, regardless of where the consultant was obtained. In most instances, Duke's rates of pay were closest to those paid by commercial firms.

MATTER FOR CONSIDERATION BY THE COMMITTEE

The generally higher rates obtained by consultants in the private sector would seem to warrant consideration being given to introducing some flexibility in the limitation on rates allowable by Government agencies seeking top-level assistance.

CHAPTER 7

SCOPE OF REVIEW

Our review was limited to an examination of contracts for and administrative procedures pertaining to the services of experts and consultants obtained by DOD under the circumstances described in the letter from the chairman of the House Committee on Appropriations. (See app. I.)

At the Army Research Office-Durham and at Duke, we reviewed contract files and payment vouchers for 35 contracts awarded by the Research Office to Duke from 1961 through June 30, 1970. We identified payments under these contracts which related to the cost of obtaining the assistance of scientists. For fiscal year 1970 we identified payments made by Duke to individual scientists, the purposes for which the scientists were hired, and payments which exceeded the GS-18 rate.

We determined the practices followed by the Research Office and Duke in selecting, arranging for the services of, and making payments to scientists hired through the Army-Duke contracts. We discussed with Research Office officials their justifications for hiring scientists through contracts with Duke.

At the Army Electronics Command we obtained information on the Army-Duke arrangement from the point of view of using activities. We inquired into the urgency of the requests for scientific assistance, the reasons for using the Army-Duke arrangement in preference to civil service appointments, and the effects of recent changes in procedures for obtaining consultants.

We examined contracts awarded by the Office of Naval Research to the Smithsonian Institution and the American Institute of Biological Sciences to determine whether experts and consultants furnished to the Navy under these contracts received pay in excess of statutory limitations.

We reviewed 36 contracts awarded by the Air Force Systems Command and 15 contracts awarded by the Air Force Office

of Scientific Research to determine the rates of pay to any experts and consultants furnished to the Air Force under these contracts. We inquired of Air Force officials as to any constraints which would make university-type contracts administratively easier to use than employing consultants directly through Government channels.

We considered a statement of position obtained from DOD on the need to use the Army-Duke type of arrangement and the effect of the revisions made to the Army-Duke basic agreement on the legality of payments made in excess of the GS-18 rate.

We determined the extent to which Government regulations permitted pay for experts and consultants while in travel status and inquired into the practices of DOD agencies in allowing such payments.

We inquired into the practices governing the compensation allowed members of the Defense Science Board, the Army Scientific Advisory Panel, the Naval Research Advisory Committee, and the Air Force Scientific Advisory Board.

We submitted questionnaires to 178 contractors holding DOD research and development contracts to obtain information on rates paid for experts' and consultants' services. Included in the 178 contractors were the top 150 contractors on DOD's list of 500 prime contractors awarded research, development, test, and evaluation contracts. The remaining 28 were selected at random to include smaller contractors in the sample. Some of these names were furnished by the Defense Contract Audit Agency and the Defense Contract Administrative Service.

We requested that the contractors voluntarily give us recent data on the name (optional), profession, and title of consultants used; how the consultants' services were obtained (direct hire or through an organization); the types of service rendered; the number of days employed; the daily rates of pay; any travel, subsistence, or per diem costs paid; and any fees, overhead, or add-on cost paid to an organization for securing the services.

Replies were received from 113 contractors. Twenty-four contractors reported that they had not used consultants on their DOD contracts in the past year. Of the remaining 89 contractors, 70 submitted detailed information on 892 consultants, from which we made analyses of rates paid for various types of services furnished. The 70 contractors comprised 49 commercial or industrial firms, 12 not-for-profit organizations, and nine universities.

APPENDIXES

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Congress of the United States
House of Representatives
Committee on Appropriations
Washington, D.C. 20515

June 19, 1970

Honorable Elmer B. Staats
Comptroller General of the United States
General Accounting Office
Washington, D. C. 20548

Dear Mr. Staats:

It has come to the Committee's attention that, under contracts with Duke University for services to Army research and development activities, the Department of the Army appears to have been circumventing the laws which limit the pay of consultants and experts. I have been advised that the Army plans to modify these contracts to avoid such legal implications by describing Duke University's services as tasks with specific statements of work and by requiring that the contractor provide end products, such as reports.

The rates of pay received by experts and consultants is a matter of great interest and concern to the Committee. I would like you to obtain information within the research and development activities of the Department of Defense, as follows:

1. Identify and gather details about current contractual arrangements of the three military services, including the Army-Duke contracts, under which organizations provide the services of experts and consultants directly to Governmental research and development activities at rates in excess of those authorized in Title 5, U.S. Code, Section 3109.

2. Emphasis should be placed upon any administrative procedures which favor such contractual arrangements as more attractive alternates to making appointments or contracts with the individuals who perform the expert or consultant services.

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3. An additional feature of the study should be a sampling of information furnished by industrial firms and non-profit contractors concerning the rates paid for the experts and consultants who assist the contractors in performing their Defense contracts and a comparison of these rates with those paid by the Government.

I would appreciate your study being completed by March 1, 1971, for use in connection with our fiscal year 1972 budget hearings.

Sincerely,

George Mahon

Chairman

APPENDIX II

ARMY RESEARCH OFFICE-DURHAM
IDENTIFICATION AND DEFINITION
OF PURPOSES FOR WHICH SCIENTISTS
WERE HIRED UNDER CONTRACTS
WITH DUKE UNIVERSITY

Purpose	Definition
A. Advisers	
1. Individual adviser	--An outstandingly well qualified scientist/engineer in the United States, who singly and independently gives advice to an installation, agency, or laboratory, generally not to exceed 20 days in any year's time, concerning the solution of a particular problem.
2. Foreign scientist	--A scientist/engineer from a friendly foreign country, who is recognized throughout the scientific world for his accomplishments in a given area and who visits an Army installation/agency, generally for 1 day, to present his individual accomplishments in that area to Army scientists, so as to improve their capabilities and competence.
B. Groups	
1. Interdisciplinary studies	
a. Review panel	--A team of outstandingly well qualified scientists/engineers generally in number from 3 to 7, who convene for about 1 to 3 days for

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Purpose	Definition
	the purpose of reviewing specific material or programs presented by a laboratory or agency and who give guidance to that agency in a consensus of recommendations on the direction of research efforts on a particular topic or in a given area.
b. Working conference	--A group of 4 to 20 outstandingly well qualified scientists/engineers who have high-level expertise and who are currently concerned with research in the area of the conference subject. They meet as a group over 1 to 2 days for the purpose of exchanging research results obtained and theories advanced for pursuit of research to the end that Army scientists working in the area of the topic of the conference will be aware of the current state-of-the-art of this subject and will learn how to apply this knowledge to their purposes.
c. Case studies	--Preparation of an in-depth study of a given topic by a science specialist for an Army installation's use in its program of teaching or training.
d. Study group	--A group of outstandingly well qualified scientists/engineers, generally in number from 4 to 6, who have high-level expertise in a given area, and who meet as a group for 2 to 20 days for the purpose of studying in depth a

Purpose	Definition
	subject of critical significance to the Army and of making recommendations, as appropriate.
e. Senior scientist steering group	--A group of senior scientists, recognized as authorities in given areas with broad backgrounds in many disciplines, generally in number from 4 to 10, depending upon the complexity of the scientific investigation to be undertaken, who meet for 1 to 3 days and give advice and assistance in connection with technical problems of immediate Army interest.
2. Symposia	--A convening of a group of scientists/engineers recognized as being uniquely qualified in an area of science or technology. These authorities present the results of their research and discuss the research efforts of their colleagues in considerable depth. The meeting results in the dissemination of the latest scientific findings and improved technological communications, which in turn lead to better procedures and the most timely resolution of problem areas relevant to the interests of the Army.
C. Summer program	--A mechanism whereby certain highly competent scientists and engineers can be used within Army laboratories on a temporary basis (for limited periods of time) to work side by side with Government employees, instructing them in the most recent scientific findings

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Purpose	Definition
	and techniques, and, in turn, being instructed in the most urgent and meaningful Army studies in order to facilitate the solution of Army problems.
D. Instruction	
1. Seminar	--An outstandingly well qualified scientist/engineer who visits an Army installation for 1 day for the purpose of presenting a colloquium on a subject of interest to the scientists working at that Army installation.
2. Lecture	--A scholarly discourse presented by a scientific authority in the subject matter. The presentation is designed to raise the level of competence of the arsenal scientist on the working level so that he can better cope with similar research problems as they arise.
E. Technical evaluation	--The purpose of a technical evaluation is to apply the intellect and reasoning of one or more recognized scientific authorities to a technical suggestion or proposition advanced usually (but not always) by their peers. The evaluator(s) have the responsibility to critique the concepts or procedures proposed to determine their scientific merit or integrity, the feasibility or practicability of the proposal, and the competence of the proposer to produce that which he proposes. By careful choice of evaluators, many proposals can be declined that

Purpose	Definition
	otherwise might be accepted only to find that they are unworkable after a wasteful expenditure of precious time and money.

APPENDIX III

EXAMPLES OF SCIENTISTS PAID

IN EXCESS OF GS-18 RATE BY DUKE

INDIVIDUAL ADVISOR

At the request of the Army Electronics Command, Fort Monmouth, in January 1969 the Research Office placed an order against Duke contract DA-31-124-ARO-D-399 for the services of a specific scientist to be provided for 20 days during the year February 11, 1969, through February 10, 1970. The order to Duke, dated February 4, 1969, stated that this individual had consented to assist scientists of the Electronics Command on certain problems in theoretical and experimental phases of crossed-field-noise generator and amplifier work and electron-gun problems.

Background information on the scientist indicated that he was a physicist with specialization in electrophysics, electronic tubes, microwave generators, and amplifiers and was serving as a professor of electrical engineering at an educational institution in New York. We also noted that the scientist had taught a course in microwave tubes at the Army Electronics Laboratories in 1963 and had provided services to the requesting activity each year since 1965. The scientist published eight major scientific articles during the years 1955 through 1961.

The rate of compensation for this scientist was set at $150 a day.[1] We were told by the Duke official charged with administering the contract that this rate of pay was established because (1) the scientist was outstanding in his field and able to command high fees and (2) salaries paid to professors in the electrical engineering department at the educational institution where the scientist was employed were known to range from $25,000 to $30,000 annually.

This scientist was paid $3,000 for providing advice and assistance to scientists of the Army Electronics Command for 20 days during the period February 18, 1969, through February 10, 1970. Travel expenses totaling $579 also were paid

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[1]The GS-18 maximum rate in February 1969 was $116.

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during the year. In requesting payment for services rendered during the 20 days and for the related travel expenses, the scientist indicated that he had worked from 10 a.m. through 4 p.m. each day and had commuted from New York City to Fort Monmouth (approximately 50 miles) using a car rented for about $460 for the 20 days.

The scientist submitted a brief statement to Duke citing the services rendered over the 20 days, as follows:

> "Consultant at U.S. Army Electronic Command Laboratories, Fort Monmouth, N.J. with group on Crossed Field Devices headed by ***" (Name deleted.)

A Research Office official gave us information indicating that the scientist had provided reports to the Electronics Command relating to the services provided under this order. We were told that the scientist, jointly with an engineer at the Army Electronics Command, had a patent application pending as a result of his assistance, that evidence of his assistance appeared in laboratory notebooks and internal project reports, and that an article, prepared as a result of his assistance, had been published.

REVIEW PANEL

In December 1969 the Research Office received a request from the Army Missile Command, Redstone Arsenal, Alabama, to provide the services of a specific engineer for a period of 10 days in calendar year 1970. Subsequently the requirement for the services of the engineer was increased to 15 days. The individual was requested to serve on an ad hoc committee conducting an in-depth design review of the improved HAWK missile. The services were provided under contact DA-31-124-ARO-D-9 with Duke. Correspondence from Duke to the engineer notifying him of his selection to serve on the committee indicated that the Research Office had made the initial contact with the engineer.

Background information on the individual indicated that he held a degree in electrical engineering and had pursued graduate study. Also, he had broad experience in electronics engineering and held patents jointly with others on certain electronic homing and guidance systems. He was listed in

APPENDIX III

American Men of Science, a publication of biographies of individuals noted for (1) achievements in scientific work of a stature at least equivalent to that associated with the doctorate degree coupled with continued activity in such work, (2) research activity of high quality in science, or (3) attaining a position of substantial responsibility requiring scientific training and experience approximately equal to that required under the above two conditions. One technical article had been published by the engineer, and he was currently working in a laboratory in the academic community. He had been authorized previously to render his services under the contract with Duke for 23 days.

A daily fee of $200[1] was established for this engineer. We were told by a Duke representative that the $200 rate was established because (1) the individual had previously served on many "blue ribbon" panels composed of highly qualified members and (2) the university at which he was currently serving was known to pay high salaries.

The engineer worked 14 days in January, 1 day in April, and 1 day in August 1970 under this authorization and was paid $3,200 in fees and about $1,200 for travel expenses. The travel involved three trips between Washington, D.C., and Boston and four trips between Washington, D.C., and Huntsville, Alabama.

On the request for payment of fees submitted to Duke, the engineer stated that he had rendered service as a member of the improved HAWK design audit committee. Research Office officials told us that the engineer provided seven memorandums of about two pages each to the Chairman of the HAWK Audit Committee as a result of work performed in an advisory capacity under this authorization.

STUDY GROUP

In March 1970 the Assistant for Research, Office of the Assistant Secretary of the Army for Research and Development, asked the Research Office to obtain the services of a

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[1]The GS-18 rate in effect in January 1970 was $128, although $136 became effective retroactively in April 1970.

scientist to serve as chairman of an ad hoc group to evaluate certain problems concerning obsolete munitions and disposition of such material for the Army. The services were requested for 3 days in April 1970 and were obtained under contract DA-31-124-ARO-D-4 with Duke.

Although Duke is now responsible for the selection of scientists under the contracts, we observed, in the notification sent by Duke to this scientist in March 1970, that the Research Office or some other activity had apparently made arrangements with the scientist prior to the mailing of the notice. In the letter of notification, the Duke contract supervisor stated that:

> "We understand from ARO-D [Army Research Office-Durham] that you have agreed to render these services and that the exact days of assistance will be determined to the mutual satisfaction of yourself and *** ARO-D."

The scientist was a former Duke faculty member, recently retired, who had considerable experience serving on scientific committees, both as a member and as a chairman. He had been authorized to provide previous services under the contract with Duke for 3 days in 1969 and for 5 days in 1970. Limited background information obtained on this scientist indicated he had several major scientific publications and was listed in American Men of Science. We were told by a Duke representative that a daily rate of $250[1] was authorized because (1) the individual was a driving force in organizing and running committees, (2) he possessed a great deal of knowledge in his field, and (3) he was a national figure and knew who to acquire as members of various committees.

For the 3 days of service provided in April 1970, a total of $750 in fees and about $290 travel expenses was paid. He traveled by air to Utah to chair the review committee for 1 day, departing from Durham, North Carolina, on April 8 and returning on April 10. He later worked 2 days at the Research Office to complete the draft of the committee's report.

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[1] The GS-18 rate in April 1970 was $136.

APPENDIX III

On the request for payment for services rendered submitted to Duke, the scientist included a brief statement which showed that he had chaired the meeting and had completed the draft report at the Research Office. Research Office officials told us that the scientist had prepared a technical report dated May 1, 1970, setting forth the results of the committee's evaluation, which was sent to the Office of the Assistant Secretary of the Army for Research and Development.

DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING
WASHINGTON, D. C. 20301

14 SEP 1970

Mr. Harold H. Rubin
Associate Director (R&D)
U.S. General Accounting Office
Defense Division, Room 6079
441 G Street, N. W.
Washington, D. C. 20548

Dear Mr. Rubin:

This is in reply to your letter of July 6, 1970, in which you discuss a request from the Chairman, Committee on Appropriations, House of Representatives, for information on the pay received by certain experts and consultants utilized by the Department of Defense (OSD Case 3143).

It is understood that information in regard to specific contracts that may exist for the purpose of providing services of experts and consultants has been provided to you directly by the Military Departments. In addition however, you requested that we provide a DOD position statement in regard to the use of contractual arrangements for this purpose. The following paragraphs indicate the position of the Department of Defense in these matters.

a. Appointment of consultants under regular procedures is used in those cases where a relatively long term need for a particular expert can be forecast in advance and firm arrangements made with him for his availability. In those cases where unforeseen problems requiring the best in scientific or technical ability arise and appropriate experts are not available through existing consultant appointments, DOD Agencies may utilize a contractor, generally a university. The contractor is normally responsible for the assessment of the requirement and the provision of the appropriate scientific expertise for solution of the problem.

b. The contractor selects the scientific personnel and negotiates their fees within the normal going rates for such short time services. In most cases, the net pay is approximately the same as that paid appointed consultants, since the contract personnel are paid only for actual days served while appointed consultants are paid portal-to-portal.

c. Contracts are written for consultant services to obtain the best technical assistance possible, usually from people who could not be hired full time. Specifically, the thrust of the contract is not to provide bodies but to provide expert technical service.

d. The DOD Agencies generally obtain these services through a university contract because of the favorable standing of the university in the scientific community and its knowledge of the personnel available and their qualifications. The hiring of the scientific personnel is done in accordance with established academic consultant policies.

e. This contractual service does not substitute for, but is a supplement to the appointment procedures to meet the DOD's needs in cases of urgency or critical, highly specialized situations.

Sincerely,

for John S. Foster, Jr.

U.S. GAO Wash., D.C.